Listing of Claims

1. (Currently Amended) A method for authoring a speech application, comprising the steps of:

creating one or more reusable VoiceXML dialog components;

creating an associated parameter object for each of the reusable VoiceXML dialog components; and

creating a VoiceXML document comprising code for invoking a reusable VoiceXML dialog component and code for configuring the invoked reusable VoiceXML dialog component using an associated parameter object,

wherein the step of creating a reusable VoiceXML dialog component comprises creating a re-entrant reusable VoiceXML dialog component that allow reusable VoiceXML dialog components to be one of initiated, interrupted, inspected, or resumed with a partially filled result object or state object.

- 2. (Original) The method of claim 1, further comprising the step of populating each associated parameter object with appropriate parameter values.
- 3. (Original)The method of claim 1, wherein the code for invoking a reusable VoiceXML dialog component comprises a subdialog element.
- 4. (Original)The method of claim 1, wherein the parameter object comprises a ECMAScript parameter object.
- 5. (Original)The method of claim 1, further comprising the step of building a library of reusable VoiceXML documents.
- 6. (Original)The method of claim 1, comprising the step of building a reusable VoiceXML dialog module comprising a standardized set of reusable VoiceXML dialog components.

- 7. (Original) The method of claim 1, wherein the parameter object comprises one of default prompts, object-specific resources, constructors that combine default and application specific parameters, methods for manipulating parameter content, and a combination thereof.
- 8. (Original) The method of claim 1, wherein the VoiceXML document further comprises code for dynamically compiling a grammar.

9. (Canceled)

- 10. (Currently Amended) The method of claim [9] $\underline{1}$, wherein re-entrant objects are used for mixed initiative.
- 11. (Original) The method of claim 1, wherein the VoiceXML document comprises code for calling application-specific objects comprising interaction objects and service objects.
- 12. (Original) The method of claim 11, wherein the code for calling an interaction object comprises a subdialog element and wherein the code for calling a service object comprises an object element.
 - 13. (Currently Amended) A speech application server, comprising:
 - a VoiceXML processor for parsing and rendering a VoiceXML document; and
- a library comprising one or more reusable VoiceXML dialog components that are accessible by the VoiceXML processor, wherein the VoiceXML document comprises code for invoking a reusable VoiceXML dialog component and code for configuring the invoked reusable VoiceXML dialog component using an associated parameter object,

wherein the reusable VoiceXML dialog components comprise one or more re-entrant reusable VoiceXML dialog component that allow reusable VoiceXML dialog components to be one of initiated, interrupted, inspected, or resumed with a partially filled result object or state object.

- 14. (Original) The speech application server of claim 13, wherein a reusable VoiceXML dialog component is invoked using a subdialog element.
- 15. (Original) The speech application server of claim 13, wherein the parameter object comprises an ECMAScript parameter object.
- 16. (Original) The speech application server of claim 15, wherein an ECMAScript parameter object comprises a container that provides one of default prompts, object specific resources, constructors that combine default and application specific parameters, methods for manipulating parameter content and a combination thereof.
- 17. (Original) The speech application server of claim 13, wherein the library of reusable VoiceXML dialog components is maintained on a server repository for dynamic access at execution of a reusable VoiceXML dialog component, or maintained on a local repository, or both.
- 18. (Original) The speech application server of claim 17, wherein the repository further comprises default grammars and audio prompts to support behavior of the reusable VoiceXML dialog components.
- 19. (Original) The speech application server of claim 17, wherein the library further maintains a reusable VoiceXML dialog module comprising a standardized set of reusable VoiceXML dialog components.
- 20. (Original) The speech application of claim 19, wherein the reusable VoiceXML module supports dialog localization for other languages.

- 21. (Original) The speech application server of claim 13, further comprising repository of reusable ECMAScript functions.
- 22. (Original) The speech application server of claim 13, further comprising a repository for dynamic grammar compilers and audio prompt editors, which can be ported to the VoiceXML processor platform.
- 23. (Original) The speech application server of claim 13, wherein the VoiceXML processor comprises a VoiceXML browser.
- 24. (Original) The speech application server of claim 13, wherein the speech application server provides a speech interface for a multi-modal browser.
 - 25. (Canceled)
- 26. (Currently Amended) The speech application server of claim [25] <u>13</u>, wherein reentrant objects are used for mixed initiative.
- 27. (Original) The speech application server of claim 13, wherein a reusable VoiceXML dialog component comprises an object element for providing dynamic data access.
- 28. (Currently Amended) A method for implementing a speech application, comprising the steps of:

receiving and parsing a VoiceXML document;

invoking a reusable VoiceXML dialog components using a subdialog element; instantiating an associated parameter object for configuring the invoked reusable VoiceXML document; and

dynamically compiling a grammar for the invoked reusable VoiceXML dialog component.

- 29. (Original) The method of claim 28, wherein the step of instantiating an associated parameter object comprises using ECMAScript.
- 30. (Original) The method of claim 28, further comprising the step of maintaining a repository comprising a library of reusable VoiceXML dialog component and associated parameter objects.
- 31. (Original) The method of claim 29, further comprising maintaining a repository of default grammars and audio prompts.
- 32. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for implementing a speech application, the method steps comprising:

receiving and parsing a VoiceXML document;

invoking a reusable VoiceXML dialog components using a subdialog element; instantiating an associated parameter object for configuring the invoked reusable VoiceXML document; and

dynamically compiling a grammar for the invoked reusable VoiceXML dialog component.

- 33. (Original) A server-side speech application server, comprising:
- a VoiceXML page generation engine for dynamically building a VoiceXML page;
- a first database comprising one or more server-side reusable VoiceXML dialog components that are accessible the VoiceXML page generation engine for generating an intermediate VoiceXML page;

a second database comprising backend data that is accessible by the VoiceXML page generator to insert data in the intermediate VoiceXML page to generate a VoiceXML page that is served to a requesting client.

34. (Original) The server of claim 33, wherein the reusable VoiceXML dialog components comprise beans and wherein the VoiceXML page generation engine comprises a JSP (java server pages) engine.